

REMARKS

Claims 1-9 and 14-23 stand rejected under 35 USC § 103(a) as being obvious over Nardeo (US 6,530,897).

The claimed subject matter is directed to a steerable catheter having a rack and pinion mechanism in the handle to convert rotational movement of a thumbwheel to linear translational movement that draws the deflection wire proximally to induce a bend in the catheter body. The examiner admits that Nardo does not disclose the rack and pinion mechanism. Instead, Nardo has the deflection wire tied directly to the rotating thumbwheel. However, the examiner contends that substitution would be obvious because both mechanisms allegedly “perform equally well” to translate rotational movement to linear movement in order to pull the deflection wire and induce bending of the catheter body. Even a cursory inspection of the Nardo mechanism reveals that its performance does not provide the same precision in linear movement of the deflection wire as provided by the claimed subject matter.

As shown in Nardo, the deflection wire is coupled to a point on the periphery of the round rotating thumbwheel.

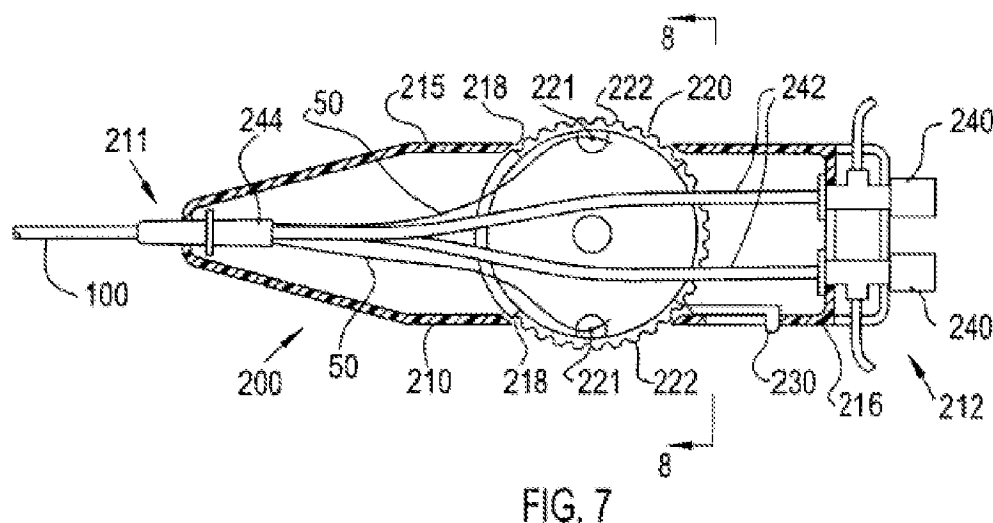


FIG. 7

As a consequence, the deflection wire 50 is not retracted along a linear path that is substantially aligned with the lumen tube 100. Rather, the deflection wire is drawn along an oblique path to the lumen. As such, because the lateral displacement distance of the connection point 221 from the centerline of the lumen changes as the thumbwheel is rotated, there is a corresponding non-linear translation of the deflection force vector applied to the deflection wire.

The rack and pinion mechanism of the claimed subject matter, however, affords better performance in that the deflection force vector is always applied in the same direction, which is along a path that is substantially parallel to the deflection lumen. The enhanced performance is afforded by the rack arm extending within the handle, obliquely to the longitudinal axis, from the runners to the linear rack, such that the attachment point of the deflection wire is movable along a linear path that is substantially aligned with the deflection lumen.

Therefore, the premise underlying the examiner's alleged "obvious matter of design choice" is flawed. Accordingly, the obviousness rejection fails and should be withdrawn.

Claims 10-13 also stand rejected as being obvious over Nardeo in view of Thompson (US 5,358,478). Claims 24-26 are rejected as being obvious over Nardeo in view of Biggs (US 6,030,360). In these rejections, Nardeo is relied upon in the same manner as in the rejections of claim 1. Because the rejection of claim 1 has been shown to be without merit, it necessarily follows that the rejections of claims 10-13 and 24-26 also fail.

Withdrawal of the instant rejections and issuance of a Notice of Allowance is respectfully requested.

Respectfully submitted,

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Date

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